

TERA
40V

MICRO
DYNAMICS

CTS Ready

Ergonomics Design

FC300 Meehanite® Casting

High Speed ATC

Rear Operation Panel

MICRO
DYNAMICS
Precision Performance

sales@microdynamicsfa.com
www.microdynamicsfa.com



MD202601E/SAE(DEMO)

MICRO
DYNAMICS
Precision Performance

VERTICAL MACHINING CENTER
Compact, Durable, Powerful,
Strong and Accurate



MEGA
TERA SERIES
FANUC Specifications

MEGA / TERA SERIES

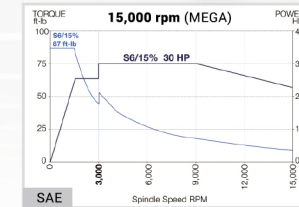
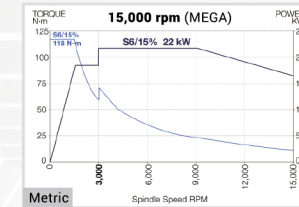
DIRECT DRIVE SPINDLE - BBT / CAT / DIN / HSK-63A

MEGA SERIES

Power **22 kW (30 HP)**

15,000 rpm Standard

Torque **118 Nm (87 ft-lb)**

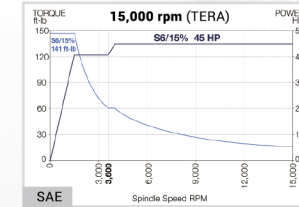
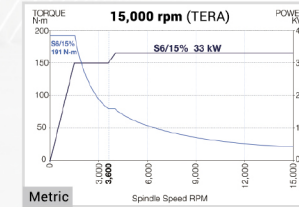


TERA SERIES

Power **33 kW (45 HP)**

15,000 rpm Standard

Torque **191 Nm (141 ft-lb)**



BUILT-IN SPINDLE - BBT / CAT / DIN / HSK-63A

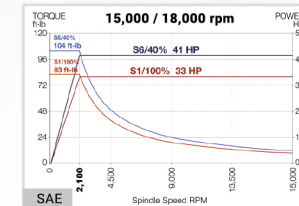
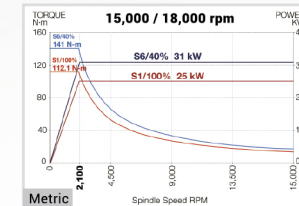
MEGA SERIES / TERA SERIES

15,000 rpm Standard

Power **31 kW (41 HP)**

18,000 rpm Option

Torque **141 Nm (104 ft-lb)**

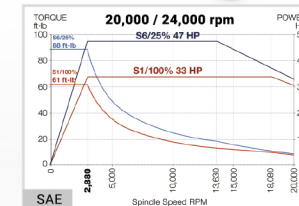
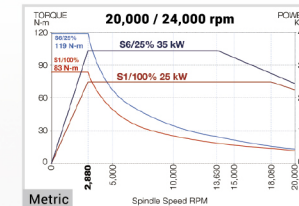


20,000 rpm Option

Power **35 kW (47 HP)**

24,000 rpm Option

Torque **119 Nm (88 ft-lb)**



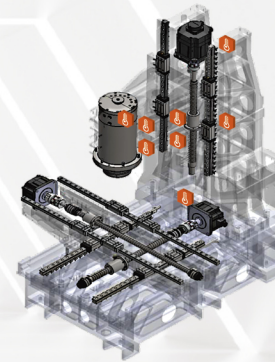
Coolant Through Spindle and
Air Through Spindle (opt)

- 20-Bar (290 psi)
- 40-Bar (580 psi)
- 70-Bar (1,000 psi)

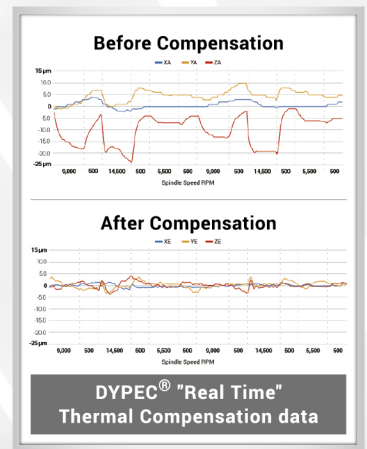
MICRO DYNAMICS VERTICAL MACHINING CENTER

DYPEC® Thermal Compensation

Dynamic Predictive
Error Compensation
(Resolution 0.1µm)



THERMAL SENSORS



X/Y/Z axis static in micron error
before and after DYPEC®
compensation.(48 hours test).

FANUC Oi-MF Plus Standard Functions

- 15" Monitor touchscreen.
- Conversational programming
- SmartGuide-I.
- 3D Simulation.
- AI Contour Control.
- 1,500 blocks ahead.
- Memory: 4 GB (Opt. 32 GB).
- Operation of the program
from USB.
- Smooth tolerance control.
- Jerk control.
- Machining condition selection
function.
- Conversion from FANUC
cycles to G-code.



MICRO DYNAMICS HMI



PART SETUP TOOL SETUP MAGAZINE MONITOR ATC RECOVERY



VERTICAL MACHINING CENTER

The Micro Dynamics Vertical Machining Center Line has evolved significantly over the past years, further solidifying its position as a leader in versatile and multi-purpose machining centers. The new enhanced MEGA/TERA Series continues to offer compact, durable, powerful, and accurate solutions for a variety of industries. With the integration of advanced Fanuc control systems, these machines provide even greater precision and efficiency, making them ideal for the die and mold industry, aerospace, automotive, semiconductor production, job shops, and general machining sectors. This maturity in product development ensures that manufacturers experience unparalleled performance and reliability, bringing a new level of excellence to their operations.

POWERFUL

Integrated Micro Dynamics Built-in Spindle.

COMPACT

Design with small footprint.

STRONG

FC300 Meehanite® casting.

RELIABLE

Highest quality mechanical and electrical components.

Intergrated Automation

Fanuc standard.

FANUC iHMI

Fanuc standard.

15" TOUCHSCREEN

Ergonomically friendly.

THERMAL COMPENSATION

DYPEC® - Dynamic Predictive Error Compensation.

RIGID TAP

Up to 6,000 rpm.

COLLISION DETECTION

Machine stops if a collision is detected in all axis.

SMOOTH TOLERANCE* CONTROL

Fanuc standard.

FANUC MANUAL GUIDE*i*

Fanuc standard.

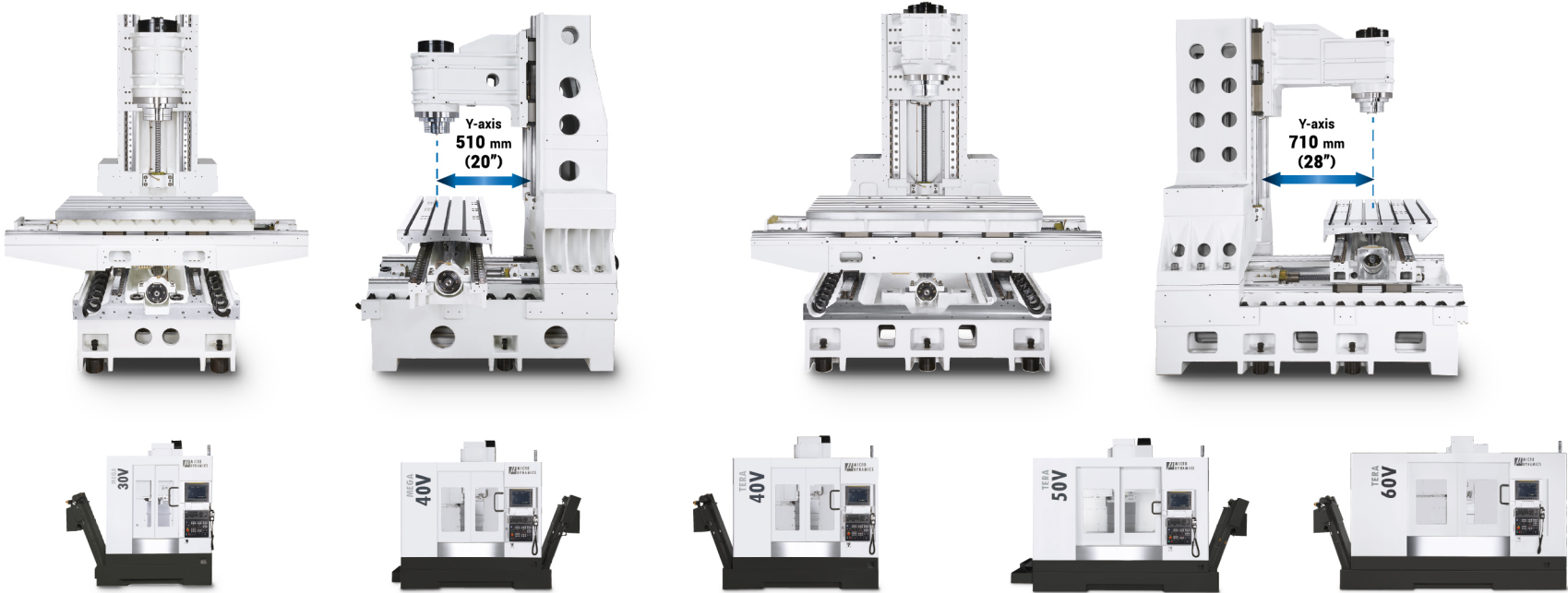
DYPEC®
THERMAL
COMPENSATION

MICRO DYNAMICS
HMI

FANUC
Oi-MF Plus

MEGA SERIES

TERA SERIES



SERIES	MEGA series		TERA series		
ITEM / MODELS	MEGA 30V	MEGA 40V	TERA 40V	TERA 50V	TERA 60V
X Axis	760 mm (30")	1,020 mm (40")	1,020 mm (40")	1,270 mm (50")	1,524 mm (60")
Y Axis	510 mm (20")	510 mm (20")	710 mm (28")	710 mm (28")	710 mm (28")
Z Axis	510 mm (20")	510 mm (20")	635 mm (25")	635 mm (25")	635 mm (25")
Table Size	860 x 500 mm (33.9" x 19.7")	1,120 x 500 mm (44.1" x 19.7")	1,120 x 700 mm (44.1" x 27.6")	1,420 x 700 mm (55.9" x 27.6")	1,724 x 700 mm (67.9" x 27.6")
Spindle Taper	40 Taper Dual Contact (BBT / CAT / DIN / HSK-63A)				
Spindle Speed	Direct Drive: 15,000 rpm / Built-In: 15,000 rpm				
Spindle Motor Power	Direct Drive: 22 kW (30 HP) / Built-In: 31 kW (41 HP)		Direct Drive: 33 kW (45 HP) / Built-In: 31 kW (41 HP)		
Max. Cutting Torque	Direct Drive: 118 Nm (87 ft-lb) / Built-In: 141 Nm (104 ft-lb)		Direct Drive: 191 Nm (141 ft-lb) / Built-In: 141 Nm (104 ft-lb)		
Rapid Feedrate (X / Y / Z axis)	48,000 / 48,000 / 48,000 mm/min (1,889 / 1,889 / 1,889 ipm)				
Tool Magazine Capacity	30T	40T	40T	40T	40T
Foot Print Size (W x D)	2,389 x 2,245 mm (94.1" x 88.4")	3,044 x 2,293 mm (119.8" x 90.3")	3,137 x 2,478 mm (123.5" x 97.6")	3,606 x 2,478 mm (142" x 97.6")	4,322 x 2,478 mm (170.2" x 97.6")
Machine Height	2,823 mm (111.1")	2,823 mm (111.1")	2,953 mm (116.3")	2,953 mm (116.3")	2,953 mm (116.3")
Machine Net Weight	4,890 kg (10,780 lb)	5,610 kg (12,368 lb)	8,040 kg (17,725 lb)	8,600 kg (18,960 lb)	9,170 kg (20,216 lb)

Note: Specifications subject to change without notice.